

REMARKS

The claims have been amended so as to take care of the formal matters kindly noted by the Examiner.

The Claims have also been amended so as to sharpen their definition of the invention relative to the cited references.

Reconsideration is accordingly respectfully requested, for the rejection of the claims as anticipated by or unpatentable over WILLI 5,549,696 ('696), alone or in view of NOBLE or NOILES or FIXEL.

The rejection falls down on WILLI, and particularly the pole 4 of WILLI.

Specifically, the bottom of the shell of US '696 has, on its pole, a throughhole (2d) with a circular cross-section, the periphery of which protrudes from the bottom of the shell. This throughhole is intended to receive a corresponding protrusion (4) of the insert.

Contrary to the stud of the invention, this device does not help to prevent the extraction of the insert, since the protrusion of the lining merely penetrates into the throughhole, without being retained therein. The area which surrounds its base merely rests on the protruding periphery of the throughhole. Nothing on the protrusion of the insert or on the protruding periphery of the throughhole, could prevent the extraction of the

insert, in particular because the protrusion has no grooves or lips on its side surface which would make it similar to the stud of the invention.

In fact in '696, these two elements (both of which are made of metal: col. 2, line 41 and col. 2, line 57, contrary to the invention where the lining is made of a polymer) are fixed one on the other by a dedicated part (8) inserted into a throughhole (7) at the periphery of the lining. A side of this part rubs on an area of the shell perimeter.

So, in '696 there is no configuration which would be structurally or functionally similar to the one claimed in the present application. The elements which retain the lining are set at the perimeter of the shell and not on its bottom. They do not comprise a stud having a groove or a lip, in or on which a corresponding part of the insert would be inserted. Also, '696 needs a dedicated separate part (8) for the fixation of the lining on the shell, while in the invention this fixation is performed only by a cooperation between the lining and the shell, without the need of another part.

That clearly shows that '696 and the invention rely on different principles, and are distinct one from the other not only thanks to mere matters of design.

Moreover, the part (4) of '696 is in fact present on the lining and not on the shell. And the parts "groove" and "lip" are not on this part (4), but on the peripheral part of the

shell. So, they do not cooperate with the part (4). Accordingly, one cannot say that '696 would show a configuration symmetrical to the one of the invention where a stud would be present on the lining and not on the shell and where the corresponding groove/lip would be present on the shell and not on the lining. The fixation of '696 functions in a quite different way.

Another difference between '696 and the invention is that in '696, the outer shell and the inner shell are the only parts of the implant, while in the invention the metal shell and its polymer lining form an insert, which must itself be placed into a cup, which is itself fixed in the patient's bone. An advantage of such a configuration is that the insert can be perfectly stable in the cup thanks to a conicity given to its external face, and that since the polymer rear face is covered by a metal shell, polymer particles cannot come out of the implant from the rear side of the lining.

Claims 16-22, 23, 27, 28 being dependent directly or indirectly on main claim 15, are patentable because of that dependency.

Claim 24 was rejected in view of a combination between '696 and US 5,002,580 ('580) which teaches to coat the inner shell with a ceramic material.

In fact, '580 speaks of the use of a ceramic material for making a part or the whole of the femoral element of a hip

prosthesis. It would not be suggested to coat the cup with ceramic. Anyway, since '696 does not show or suggest the insert of claim 15, the rejection cannot stand.

Claim 25 was rejected in view of a combination between '696 and US 4,678,472 ('472). This last document describes the obtention of a lining by a thermocompression process.

But '472 does not describe the lining of a shell, but rather an element (12) coating the head (10) of a femoral prosthesis. This element can be heated when it is set onto the head (col. 9, lines 12-26).

This heating facilitates the snapping of the element (12) onto the head, thanks to the dilatation of the element it provokes. This element is shaped before it is placed onto the head, while the thermocompression process used in the invention consists in injecting under pressure the unshaped polymer into the recess it must coat. So, the invention is the exact opposite of '472 on that point. None of the documents used against claim 25 is relevant.

Claim 26 was rejected in view of a combination of '696 and US 4,180,873 which would describe the insertion of a lining into a shell by impaction. But this does nothing to improve the rejection of claim 15.

As the claims now in the case bring out these distinctions with ample particularity, it is believed that they

are all patentable, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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